Item 8: SB 846 Load Shift Goal

May 31, 2023 Business Meeting

Ingrid Neumann, PhD
Energy Assessments Division, Advanced Electrification Analysis Branch

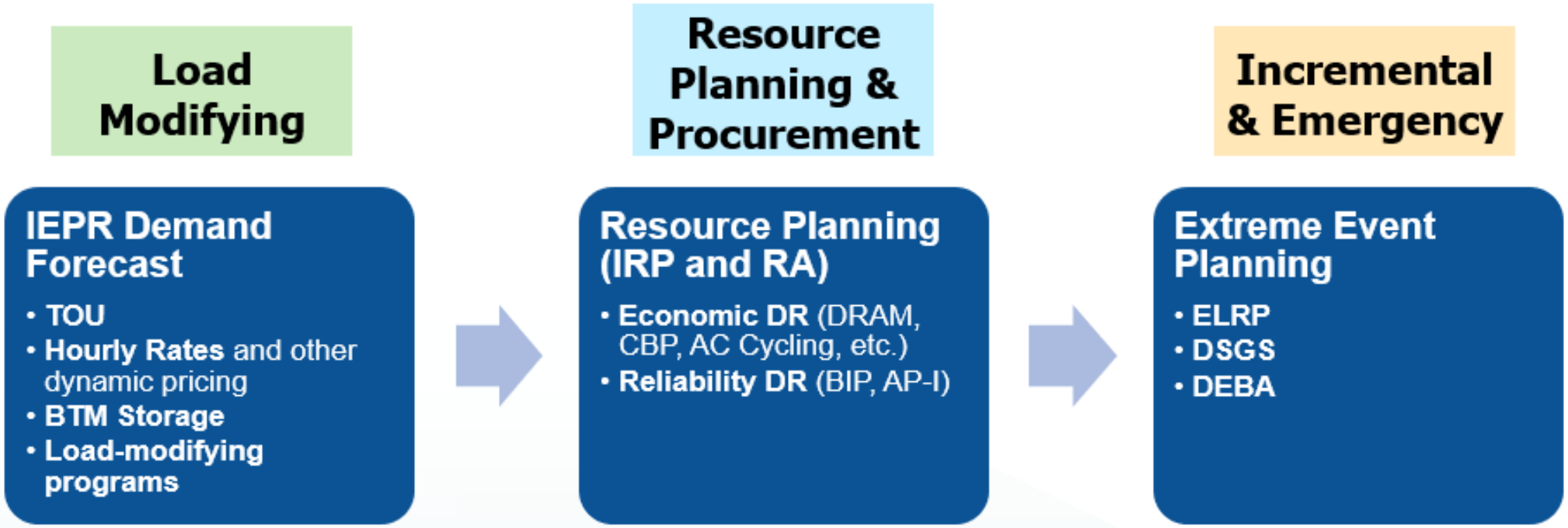
Benefit to Californians

- **Keeping the “lights on” and emissions low!**
- **Set achievable load shift by 2030**
- **Today: 3100 MW; Goal: 7000 MW**

Overview of Presentation

- **Goal Setting Framework**
  - *Current state of load flexibility and proposed goal for 2030*
- **Analysis of Achievable Potential**
- **Policy Recommendations**

Load Flexibility Across Planning Processes



Proposed Statewide Goal for 2030

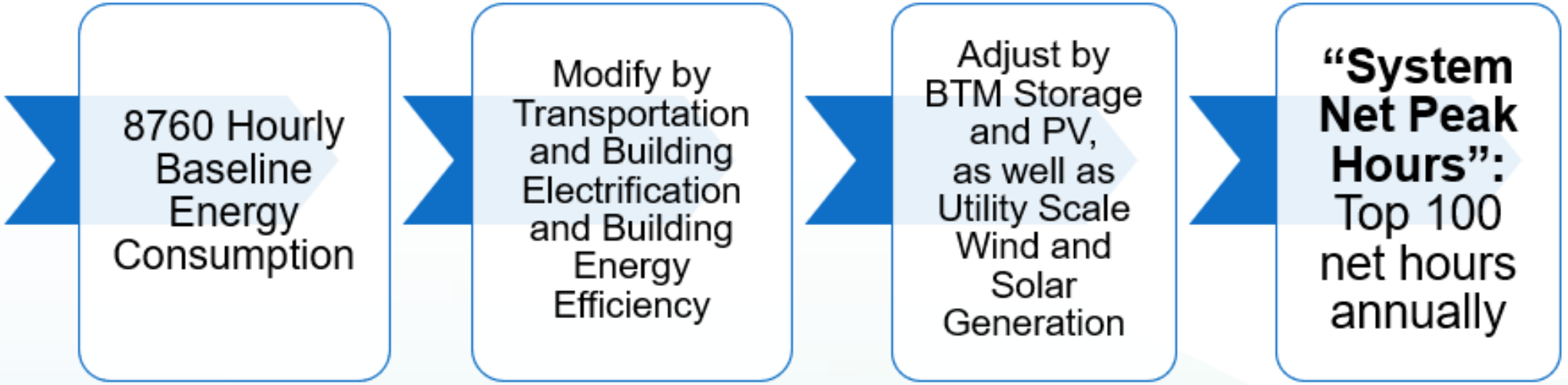
Core Planning

Category	Intervention	2022 Estimate	2030 Goal
Load-Modifying (LM)	TOU Rates	620–1,000 MW	3,000 MW
	Dynamic Pricing	30 MW	
	LM Programs	7 MW	
Resource Planning and Procurement	Economic Supply-side DR	670 MW	4,000 MW
	Reliability Supply-Side DR	740 MW	
	POU DR Programs (Non-ISO)	210 MW	
Incremental & Emergency (I&E)	I&E Programs	800 MW	
	Emergency Back-Up Generators*	375 MW*	
Total (nearest 100)		**3,100 MW**	**7,000 MW**

**Back-up generators are part of the emergency framework but are not considered true load flexibility. This capacity is not included in load flexibility totals.*

Demand Flexibility Analysis

Shift load away from top 100 “System Net Peak hours”



Six Scenarios analyzed

Reference	Reference Demand & High Load Flex	High Electrification	High Electrification & High Load Flex	Reference LBNL Hierarchy	Reference 1:10 weather year

Total Achievable Potential ~5000 to over 8000 MW

- Dynamic Pricing: ranges from 1300 to 4100 MW
- Event Based DR: ranges from 3800 to 4300 MW

Policy Recommendations Load-Modifying

- Support hourly dynamic pricing frameworks
- Encourage alternative rate and program designs
- Incentivize load-shifting technologies paired with dynamic rates

- Deploy information infrastructure to support load shifting
- Adopt Flexible Demand Appliance Standards

- Pilot program development including robust measurement and compensation protocols

Policy Recommendations
Resource Planning & Procurement

- Adopt an incentive-based capacity valuation approach

- Explore a centralized, competitive DR procurement process

- Include an adder on wholesale market revenue

Policy Recommendations Incremental & Emergency

- Pilot:
  - approaches to compensate incremental capacity delivered under critical conditions
  - a pathway for BTM energy storage and other short-duration load shifting resources

- **Periodically reassess the role of emergency resources**

Propose adoption of the Load Shift Goal

- Adopt Load Shifting Goal

Thank you!

CEC Team: Cynthia Rogers, Ingrid Neumann, and Erik Lyon